

that, within three years of the effective date of the rules adopted in this proceeding, wireless systems must provide PSAP attendants with the capability to call back the 911 caller if the call is disconnected. In addition, we noted that this feature would ideally represent a seamless process whereby any return call is connected directly to the mobile unit that originated the call, thus permitting an automatic re-ring in case of disconnection.⁸⁹

55. In the initial round of comments filed in this proceeding, parties agreed unanimously that E911 is a desirable and useful capability for wireless customers and the public. In particular, they agreed that ALI and re-ring/call back are important features for emergency services and should be required for E911 services. The focus of debate in the record was whether Commission regulation is necessary or appropriate to implement wireless E911 and, in particular, whether the Commission should adopt a mandatory implementation schedule, as proposed in the *Notice*.

56. In general, comments submitted by public safety and state and local government organizations supported a mandatory implementation schedule for certain E911 services, including ALI systems and the call back feature, as necessary to make wireless E911 a reality.⁹⁰ Comments on behalf of wireless communications carriers agreed with the view we expressed in the *Notice* that E911 is needed for CMRS wireless services,⁹¹ but argued that the ALI systems needed to achieve this objective are unproven and have not been standardized, manufactured, or field-tested.⁹² These commenters stated that the Commission should encourage the wireless industry and the public safety communities to continue to work toward compatibility

⁸⁹ *Notice*, 9 FCC Rcd at 6179 (para. 52).

⁹⁰ *See, e.g.*, APCO Reply Comments at 35-36; CMT Comments at 8; Westinghouse Comments at 7; Ericsson Comments at 10-11.

⁹¹ *See, e.g.*, PCIA Comments at ii (supporting goal of this proceeding -- the broadened availability of E911 services to users of wireless telecommunications).

PCIA fully shares the Commission's important objective of maximizing compatibility between wireless services and Enhanced 911 (E911) systems. Specifically, it concurs that subscribers to real-time voice services interconnected with the public switched telephone network ultimately should enjoy the same access to advanced emergency response services as wireline service subscribers, with due consideration for the unique characteristics of radio-based technology.

PCIA Comments at ii.

⁹² "Although the Commission proposes requirements and schedules for implementation, there remains a fundamental problem insofar as the technical solutions necessary to achieve the Commission's objectives are in various stages of development -- and none has been commercially demonstrated that meet the FCC's ultimate goals." CTIA Comments at 6-7. *See also* PCIA Comments at 15-20.

voluntarily,⁹³ should establish an advisory committee to study wireless E911 issues,⁹⁴ or should allow market forces to set the pace for deployment.⁹⁵ A number of suppliers of location systems responded that, contrary to the concerns of wireless carriers, ALI systems are already available, or can be developed to meet the timetable and accuracy standards proposed in the *Notice*.⁹⁶ Parties submitted very little data to quantify the cost of providing E911. Manufacturers generally presented estimates of the cost of their own products and argued that costs would decline or would be offset by new revenues if the Commission mandates ALI.⁹⁷

57. The Consensus Agreement represents a significant change in the views held by the signatories to the Agreement with regard to some of the central issues in this proceeding. A representative of the wireless industry, CTIA, now agrees that E911 is technically feasible and can be deployed within the proposed five-year schedule. Public safety organizations concur, and agree that the three phases in the original schedule should be condensed into two phases. The parties to the Consensus Agreement also acknowledge that the wireless industry's agreement to provide ANI and "pseudo-ANI"⁹⁸ in Phase I will make it possible for the PSAP to dial back a 911 caller so long as the mobile user has not turned off the mobile unit. Thus, these parties propose an earlier adoption of the call back feature at Phase I, rather than at the Phase II period as proposed in the *Notice*.⁹⁹ The Consensus Agreement also suggests that the "automatic re-ring" features of the wireline network need not be required at this point.¹⁰⁰

58. In their comments on the Consensus Agreement, parties again support the goals of E911 for wireless services, but some wireless industry commenters contend that neither the Phase I nor the Phase II deadlines are achievable.¹⁰¹ These commenters also argue that the

⁹³ PCIA Comments at 5.

⁹⁴ CTIA Comments at 17-18.

⁹⁵ *See, e.g.*, Air Touch Comments at 5-6; RCA Comments at 4-9; NYNEX Comments at 10.

⁹⁶ *See, e.g.*, KSI Comments at 8-10; Lockheed Comments at 3-4; C.J. Driscoll Comments at 2.

⁹⁷ *See, e.g.*, SAT Comments at 5; ART Comments at 10-11; KSI Comments at 13-14.

⁹⁸ "Pseudo-ANI" provides the number of the cell site and either the number of the carrier or the number of the caller. Pseudo-ANI numbers are utilized by carriers for several purposes, one of which is to act as a surrogate identification number for mobile units operating in a roamer mode. *See* JEM Report at 17-18.

⁹⁹ Consensus Agreement at 4-5.

¹⁰⁰ *Id.*

¹⁰¹ *See, e.g.*, BellSouth (CA) Comments at 3-7; GTE (CA) Comments at 3-5; PCIA (CA) Comments at 9-13.

Consensus Agreement ignores digital cellular, PCS, and wide area SMRs,¹⁰² that more information is necessary concerning the responsibility for providing ANI and "pseudo-ANI" and for setting standards,¹⁰³ that location technologies have not been fully field tested,¹⁰⁴ and that there is no industry-wide consensus regarding these and other issues.¹⁰⁵ BellSouth also suggests that the time frame for implementation of call back must consider the SS7/IS-41 plans of providers and the costs associated with implementing the capabilities in the PSAP systems.¹⁰⁶

59. Other wireless service providers, as well as ITS, support the Consensus Agreement deployment schedule for ALI requirement.¹⁰⁷ For example, Nextel believes that the schedule is feasible if the Commission takes measures to ensure that the LECs select protocols that are compatible with the wireless carriers' infrastructure.¹⁰⁸ The signatories to the Consensus Agreement note that industry standards will be in place shortly; that vendors have pledged their support; that wireline and wireless carriers are expected to move quickly to connect their networks wherever such interconnection can be cost justified; and that where Feature Group D has been implemented, SS7 links and standards are not required.¹⁰⁹ Various wireless carriers contend that implementation should not be required prior to PSAP ability to retrieve the ALI information.¹¹⁰

60. Equipment manufacturers are split on the issue of the deployment schedule for ALI requirements. KSI supports the Consensus Agreement, proposes to add to the ALI requirement a latency period (the period it takes to provide location information to the PSAP) of no more than 5 seconds and an updating of location information every 10 seconds, and suggests that accuracy be required to 125 meters in urban areas and to 1,000 meters in rural areas, both at a 90 percent confidence level.¹¹¹ On the other hand, Motorola and Nortel contend that the Phase I schedule

¹⁰² BellSouth (CA) Comments at 5-7.

¹⁰³ GTE (CA) Comments at 3-4.

¹⁰⁴ *Id.*

¹⁰⁵ PCIA (CA) Comments at 4-5.

¹⁰⁶ GTE (CA) Comments at 7-8; BellSouth (CA) Comments at 10.

¹⁰⁷ See, e.g., Nextel (CA) Comments at 4-6; CTIA (CA) Reply Comments at 3-4, 9-12; ITS (CA) Reply Comments at 1-3.

¹⁰⁸ Nextel (CA) Comments at 4-6.

¹⁰⁹ CTIA (CA) Reply Comments at 3-4, 9-12.

¹¹⁰ See, e.g., US West (CA) Comments at 5-8; BellSouth (CA) Reply Comments at 11; Nextel (CA) Reply Comments at 4.

¹¹¹ KSI (CA) Comments at 2-5; KSI (CA) Reply Comments at 4-5.

cannot be met. They maintain that switching and signalling capabilities to pass actual ANI and pseudo-ANI to the LEC network have not been standardized or deployed nationwide,¹¹² and Motorola contends that it takes 18 to 24 months after a standard is developed for a LEC to test new equipment in a limited number of markets.¹¹³

b. Discussion

(1) Wireless E911 Service Requirements

61. Although some parties contend that the Commission should allow E911 to develop based upon the demands of the marketplace, we believe that we should play a more active role to ensure that technologies that will enhance public safety communications will be deployed expeditiously. While, in general, we believe that marketplace demands should determine the services provided by wireless carriers, we also believe that our mandate to promote safety of life using wireless technologies requires more direct Commission action in this case. This view is consistent with the argument of public safety organizations that Commission action is necessary to ensure that E911 services are deployed in a timely fashion.¹¹⁴ While they recognize the need for an evolutionary path for the E911 rules because the timing of implementation is affected by "economic, operational and technological feasibility,"¹¹⁵ for example, the public safety organizations have contended that the pace of evolution is likely to be slower than the public interest demands unless the Commission imposes a schedule that is rigorous without being impossible or commercially self-defeating.¹¹⁶ Once installed, ALI will bring important safety benefits to all wireless customers and to the community.

62. Estimates of what full implementation of wireless E911 might cost vary widely in the record, from \$510 million to \$7.5 billion depending on the ALI technology,¹¹⁷ but we believe that it is reasonable to conclude that these costs are likely to decline in the future. We believe that advances in computer technology, economies of scale with mass production, and competition in providing systems should reduce costs associated with providing E911 service. In addition, once

¹¹² Motorola (CA) Comments at 4-5; Nortel (CA) Comments at 4-5.

¹¹³ Motorola (CA) Comments at 4-5.

¹¹⁴ The Commission is also addressing public safety services issues. See *Public Safety NPRM*, at note **Error! Bookmark not defined.**, *supra*.

¹¹⁵ APCO Reply Comments at 35 n. 31.

¹¹⁶ *Id.* at 35.

¹¹⁷ See, e.g., KSI Comments at 7-8 (according to KSI, its simplest location systems using Angle of Arrival measurements will cost less than \$30,000 per cell site); Smith Advanced Comments at 13-14 (using Global Positioning System, the cost to retrofit existing cellular phones is expected to be approximately \$200 per phone, and the cost to the PSAP is projected to be approximately \$40,000).

deployed, ALI and other E911 features may offer additional benefits, such as helping to reduce and detect fraudulent calls and providing the infrastructure for other services and features.¹¹⁸ It also may be feasible to use a single ALI system for several wireless carriers in the same city or region, thus spreading the costs. Moreover, costs are primarily incurred during the initial stages of deployment, for installation of equipment. As wireless subscribership grows, these relatively fixed costs will be spread over a widening base of subscribers, lowering unit costs per subscriber.

(2) Deployment Schedule: Phase I E911 Requirements

63. With regard to Phase I of deployment, we will require covered carriers to relay the caller's ANI and the location of the base station or cell site receiving a 911 call to the PSAP through the use of "pseudo-ANI." We believe that the schedule for this phase of E911 deployment proposed by the signatories of the Consensus Agreement is a reasonable middle ground between the positions of carriers and public safety organizations. Therefore, we will require implementation of Phase I to begin not later than 12 months after the effective date of the rules adopted in this proceeding and to be completed not later than 18 months after such effective date. In establishing this deployment schedule, we also conclude, however, that the requirements imposed upon covered carriers by our actions in establishing the schedule shall apply only if a carrier receives a request for E911 service from the administrator of a PSAP that has made the investment which is necessary to allow it to receive and utilize the data elements associated with the service,¹¹⁹ LEC infrastructure will support the service,¹²⁰ and a cost recovery mechanism is in place.

64. In reaching this conclusion, we agree with the concerns expressed by US West, and with the arguments advanced by the signatories to the Consensus Agreement in their joint reply comments.¹²¹ Should a PSAP first inform a wireless service provider less than 6 months before the required implementation date that it is capable of accepting the ANI and "pseudo-ANI" information, the carrier will be required to implement Phase I within 6 months after it receives the notice from the PSAP. We also note that our decision does not preclude carriers from implementing Phase I features sooner than 12 months after our rules become effective. Rather, we encourage PSAPs and wireless carriers to begin immediately to work together to implement E911 features as soon as possible. We find that the provision of ANI as part of Phase I will provide PSAPs the ability to call the 911 caller back if the call is disconnected, unless the caller's handset has been turned off or programmed to be redirected to voice mail. In light of the ability

¹¹⁸ See ART Comments at 10-11; SAT Comments at 14; KSI Comments at 13-15.

¹¹⁹ The PSAPs must use switches, protocols, and signalling systems that will allow them to obtain the calling party's number from the transmission of ANI. Older analog systems may not have this capability.

¹²⁰ For example, it may be problematic if LEC infrastructure does not support the provision of Feature Group D equal access, which may be used to transmit ANI and "pseudo-ANI." See para. 0, *infra*.

¹²¹ See US West (CA) Comments at 5-8; CTIA (CA) Joint Reply Comments at 4-5.

of PSAPs to call back disconnected callers, we agree with the claims of several commenters that automatic re-ring (*i.e.*, the automatic ringing of the 911 caller's number if the call is disconnected) is unnecessary.¹²²

65. We base our decision with respect to the Phase I schedule on the following analysis. First, ANI and "pseudo-ANI" have already been deployed effectively in some systems, such as in New Jersey.¹²³ Deploying them as part of Phase I will provide valuable information and will assist emergency response both by identifying the base station or cell site that received the call and by permitting call back. We recognize that some wireless providers and equipment manufacturers question whether ANI and "pseudo-ANI" can be deployed nationwide within the 12-18 month period set forth by the Consensus Agreement.¹²⁴ Equipment manufacturers, in particular, argue that the lack of SS7 standards¹²⁵ for transmitting ANI and "pseudo-ANI" will require delay in deployment of Phase I. Other wireless commenters disagree, however.¹²⁶ For example, in their Joint Reply Comments, parties to the Consensus Agreement explain that SS7 features are not necessary for carriers to transmit ANI and "pseudo-ANI." The Joint Reply Comments state that any network with the capability of providing Feature Group D equal access will also have the capability of transmitting ANI and "pseudo-ANI."¹²⁷ In addition, they note that standards which are scheduled for balloting in September in TIA's Committee TR 45.2 will make this problem transitional.¹²⁸ We believe that adopting our 12 to 18 month Phase I implementation schedule, rather than allowing the parties more time, will better promote the public interest and result in faster implementation of E911.

66. We recognize, however, that technology-related issues may prevent some wireless carriers from implementing Phase I within the timetable adopted in this Order. Therefore, a covered carrier may request a waiver of our rules, based on sufficient factual support that either (1) its network equipment is not capable of transmitting ANI and "pseudo-ANI" and its equipment cannot be upgraded within the Phase I timetable; or (2) the LEC used by the covered carrier to transmit 911 calls to the PSAP does not have the capability of transmitting ANI and "pseudo-ANI." If a covered carrier requests waiver of Phase I because its own equipment requires upgrading, the carrier shall submit with its waiver request a deployment schedule for

¹²² See, e.g., AT&T Comments at 27-29; Consensus Agreement at 4-5; GTE (CA) Comments at 7-8.

¹²³ See New Jersey Comments at 14.

¹²⁴ Motorola (CA) Comments at 4-5; Nortel (CA) Comments at 4-5.

¹²⁵ Signalling System 7 (SS7) is an out-of-band signalling system that transfers between switches information that is required to set up a call as well as other caller information.

¹²⁶ Nextel (CA) Comments at 4-6; KSI (CA) Comments at 2-5.

¹²⁷ CTIA (CA) Reply Comments at 10-11.

¹²⁸ *Id.* at 11-12.

meeting the requirements of Phase I. We note that no waiver request is required if the PSAP has not made the necessary investment to provide the capability of receiving the information transmitted under Phase I since the carriers' obligation does not arise until this point.

(3) Deployment Schedule: Phase II E911 Requirements

67. We agree with the Consensus Agreement that cancellation of the second phase of ALI implementation proposed in the *Notice* appears warranted. The commenters to the *Notice* concur that implementing this stage of E911 deployment would not be a bridge but instead could be a costly detour that could delay full implementation of ALI capability.¹²⁹ There is also convincing evidence that the benefits of the proposed second phase to PSAPs and the public would likely prove to be relatively small.¹³⁰ Therefore, the proposal that a covered carrier must provide an estimate of the approximate location of a 911 caller or the distance of the mobile unit from the receiving base station or cell site in three years will not be adopted.

68. We continue to believe that the third phase of ALI implementation proposed in the *Notice* is achievable with some modification. Because we are not adopting the second phase of our original proposal, we will now refer to our original Phase III, requiring ALI, as Phase II. The Consensus Agreement confirms that ALI is technically and economically feasible within the five-year deadline proposed in the *Notice*. While some wireless carriers see obstacles to implementing Phase II in five years, the equipment manufacturers believe a five-year deadline is achievable.¹³¹ Thus, we will require implementation of Phase II to be completed not later than five years after the effective date of the rules adopted in this proceeding.

69. We have also concluded that certain provisions we have adopted in this Order in connection with Phase I of the deployment of E911 service shall also apply in connection with Phase II of the deployment schedule. These provisions are as follows: (1) The provision for waivers. (2) The condition that the PSAP must have the capability of receiving and using information transmitted to the PSAP by a covered carrier. (3) The provision that a covered carrier has an obligation to deploy location technology within 6 months after notification by the PSAPs, if such notification occurs less than 6 months before the required implementation date.

70. Our initial proposal did not discuss a reliability factor for ALI. Based on the comments and evidence in the record from actual trials of ALI technologies, we believe that the Agreement's proposed RMS probability standard for location accuracy is reasonable.¹³² The 125

¹²⁹ See, e.g., GTE Comments at 16-20; PCIA Comments at 14-15.

¹³⁰ See, e.g., APCO Reply Comments at 2; TX-ACSEC Reply Comments at 5-6.

¹³¹ Motorola (CA) Comments at 7; KSI (CA) Comments at 3; ART Comments at 16-17.

¹³² Root Mean Square is a method by which to calculate the probability that the location information will be accurate. Based on tests performed by Associated Group and KSI, root mean square probability results in accuracy of location two-thirds to three-quarters of the time. Consensus Agreement at 2-3.

meter RMS standard will assist emergency response teams by providing relatively precise location for 911 callers and is currently technically feasible. It thus appears to represent a satisfactory initial minimum standard. Conversely, the record indicates that identifying a wireless phone's height above ground within 125 meters, for example in a building, would be more difficult to achieve within five years and is not likely to aid emergency response significantly, except in the downtown areas of major cities.

71. In light of these considerations, we adopt a requirement pursuant to which covered carriers must achieve the capability to identify the latitude and longitude of a mobile unit making a 911 call, within a radius of no more than 125 meters in 67 percent of all cases. The degree of accuracy will be calculated through use of Root Mean Square methodology. For purposes of complying with this requirement, covered carriers shall attempt to invoke the equipment and facilities they have deployed to determine mobile unit location in each case in which a 911 call transits their system. For purposes of applying the RMS methodology, the level of accuracy achieved by the carrier shall be calculated based upon all 911 calls originated in a service area in which the carrier is required to supply Automatic Location Identification to PSAPs. A covered carrier shall be required to demonstrate, upon request made by the PSAP, that its ALI system performs in compliance with the requirements established in this Order.

72. While the 125 meter RMS in two dimensions is a good starting place, however, we expect that technological advances will enable improvements after the end of the five-year period. For example, KSI's proposal of a latency time and a requirement of updating location information may be useful additions to the E911 requirements we are establishing in this Order. KSI asserts that its technology supports a confidence measure of 90 percent, that is based on a radius of less than 125 meters for urban centers and a radius of less than 1,000 meters in rural environments. We have concluded that the current record does not sufficiently demonstrate the practicality of KSI's differential standard for rural and urban areas, because KSI has not provided a definition or described how suburban or other areas should be measured. Therefore, we will not adopt KSI's proposal. In addition, we are not adopting a latency time and an updating requirement at this time because the current record does not show whether these features are generally available or are otherwise appropriate. The Commission will, however, review these matters in the further rulemaking proceeding we are initiating as part of our action today.

(4) Development of Technical and Operational Standards

73. While we are taking action in this Order to ensure the provision of 911 and E911 services over certain commercial wireless communications systems, and intend to closely monitor implementation of our decision, we do not believe it would be appropriate for the Commission to micromanage this process. We confirm our tentative conclusion in the *Notice* that we should determine what capabilities must be achieved, rather than attempting to promulgate extensive technical standards.¹³³ Among the issues that still must be resolved are the

¹³³ See *Notice*, 9 FCC Rcd at 6177 (para. 40).

development of detailed technical and operational standards necessary to implement and enable widespread wireless access to emergency communications and services, the specification of a required grade of service, the mapping required to develop the coordinates of latitude and longitude necessary for location identification, and the exact interface between the several components of the total network.¹³⁴ The nature of these issues relating to technical standards requires a level of expertise and consultation among the parties that can best be achieved through processes involving covered carriers and public safety organizations.

74. We do not find it necessary to establish an Advisory Committee or initiate a negotiated rulemaking proceeding, as requested by some commenters.¹³⁵ The parties to the Consensus Agreement have stated that they will continue to work cooperatively to make progress in resolving implementation issues. Moreover, the parties have already undertaken to resolve these issues and we are informed by them that standard-setting bodies are already meeting to consider them. For example, the T-1 Committee and the Telecommunications Industry Association are already considering some E911 standards.¹³⁶ In addition, our review of the record does not reveal any significant differences between the parties on implementation issues, although there are differences regarding the time it will take to comply with the E911 requirements. Given the degree of consensus that has been achieved regarding substantive issues involved in the implementation of E911, we do not believe there is a need to invoke the Advisory Committee mechanism at the same time, especially since doing so could risk delaying the implementation process.

75. Based on the analysis above, we conclude that we can rely on the parties to proceed with this task in good faith. Therefore, we leave the resolution of a number of technical decisions and issues necessary for implementing our decision for the parties, including service providers, public safety organizations, equipment manufacturers, standard-setting groups, and

¹³⁴ This would include the switching and signalling capabilities, such as SS7/CCS and selective routers, that are necessary for ANI originating at the wireless handset to be passed through the wireless and local exchange carriers' systems to the PSAP, as well as the standards for the transfer of TTY data to the PSAP.

¹³⁵ See, e.g., BellSouth (CA) Reply Comments at 2-5; US Cellular Comments at 1; CTIA Comments at 17-18; PCIA Reply Comments at 1.

¹³⁶ PCIA (CA) Comments at 4 ("industry members will take part in a T1P1 standards group meeting, to be held during the week of March 4, that will address wireless E911 standards as part of its agenda."); CTIA (CA) Reply Comments at 12 n. 26 ("The Consenting Parties understand that the needed standard is scheduled to be balloted by September, 1996, and that the work for all wireless interconnection standards has been consolidated in TIA's Committee TR45.2.") The *Notice* stated that "[t]here are several standards bodies that are capable of [adopting technical standards for E911], such as Committee T1, sponsored by the Alliance of Telecommunications Industry Solutions (ATIS), and its various subgroups, T1P1, T1S1, etc.; the Telecommunications Industry Association under TR 46 and TR 45.2; and research organizations, such as Bell Communications Research." *Notice*, 9 FCC Rcd at 6177 (para. 40 n.45).

state and local governments. We intend to remain actively involved, however, and will provide whatever assistance our resources permit. In that connection, we shall require the signatories to the Consensus Agreement, PCIA, and Alliance to furnish the Commission with joint reports detailing the status of the discussions, what decisions have been made, and what can be done to expedite the resolution of the issues. Such reports must be filed not later than 30 days following the end of each annual period after the effective date of the rules adopted in this proceeding.

76. We want to emphasize the importance of some of the particulars involved in providing wireless E911 services. Our decisions here, however, are consistent with our intentions as expressed in the *Notice* that we would adopt general performance criteria, rather than extensive technical standards, to guide the development of wireless 911 services. By setting forth a schedule for implementation of wireless E911 services, we are providing a time frame by which these unspecified parameters and standards must be established or resolved by the various parties involved. In view of the representations of CTIA in its reply comments on the Consensus Agreement, we believe that some of the tasks to be performed by the standard-setting group should be completed before the end of this calendar year.¹³⁷ Should we find that the parties are not maintaining their efforts to resolve these issues in good faith, we may take such actions as we believe to be necessary to implement E911 service without undue delay.

2. Carriers and Services Required To Offer E911

a. Background and Pleadings

77. In the *Notice*, we tentatively decided to require E911 service to be applicable to systems providing CMRS real time voice services using the public switched network. This would include cellular and broadband PCS, but not private mobile radio services. We asked for comment on this issue, including whether one-way paging or non-voice, non-geostationary mobile satellite service should be subject to this requirement, and whether private services not available to the public or not interconnected with the public switched network should be included.¹³⁸

78. Most of the wireless industry supported exemption for certain CMRS licensees, particularly site-specific SMR services due to their limited interconnection with the public switched network.¹³⁹ Some PCS and cellular providers contended that E911 access should be extended to all CMRS providers of voice service.¹⁴⁰ MSS carriers generally opposed the application of E911 requirements to them on the grounds that their service is international rather

¹³⁷ CTIA (CA) Reply Comments at 12, n. 26.

¹³⁸ *Notice*, 9 FCC Rcd at 6177 (para. 38).

¹³⁹ See, e.g., PCIA Comments at 6; AMTA Comments at 4-7; Nextel Reply Comments at 3.

¹⁴⁰ See e.g., Sprint Comments at 8; NYNEX Comments at 10; Ameritech at 8.

than local, that it would be difficult to route a call to the nearest PSAP, and that it would require the costly and inconvenient adaptation of handsets.¹⁴¹ On the other hand, ICSAR argued that E911 provision by mobile satellite carriers could be valuable in saving lives, although ISCAR conceded that major technical challenges still exist before mobile satellite services could provide E911 access.¹⁴² Rural cellular providers argued that they should be exempted from E911 requirements because of the high expense in low density markets, as well as the lack of PSAP capabilities in such markets.¹⁴³

79. In their comments on the Consensus Agreement, many commenters repeat their arguments in favor of exemption from E911 requirements.¹⁴⁴ RCA argues that there are many problems in implementing location technologies in rural areas, *e.g.*, cell site service areas do not necessarily correspond with PSAP service areas, and triangulation techniques cannot be performed in many rural systems. Therefore, RCA urges that cellular carriers serving rural jurisdictions must be afforded a reasonable implementation time after the PSAP has deployed the technology to receive E911 information.¹⁴⁵ On the other hand, ICSAR argues that MSS carriers should be required to implement E911 because of the potential to save persons not reachable by terrestrial cellular phones.¹⁴⁶ KSI urges that all CMRS providers, including providers of data messaging services for two-way pagers and personal digital assistants, should be subject to E911 requirements because the Commission would have difficulty in imposing E911 obligations on these companies in the future.¹⁴⁷ Both KSI and TX-ACSEC support requiring E911 obligations for rural carriers.¹⁴⁸

b. Discussion

80. No party has objected to the applicability of E911 to cellular and broadband PCS carriers. We believe that customers of these public telephone services clearly expect access to 911 and E911, especially because many of them purchase cellular telephones and are likely to purchase broadband PCS telephones primarily for security. As stated above, 62 percent of

¹⁴¹ See, *e.g.*, COMSAT comments at 3-9; IDB Comments at 3; AMSC Comments at 8.

¹⁴² ICSAR Comments at 2-4; Coast Guard Comments at 1-4.

¹⁴³ See, *e.g.*, US Cellular Comments at 5, 7-9; Springwich Comments at 9-10.

¹⁴⁴ AMTA (CA) Comments at 2; Nextel (CA) Comments at 6-7; BMJ&D (CA) Comments at 2-4; AMSC (CA) Comments at 4-9; RCC (CA) Comments at 3-7; Motorola (CA) Reply Comments at 5-6.

¹⁴⁵ RCA (CA) Comments at 2-4.

¹⁴⁶ ICSAR (CA) Comments at 1.

¹⁴⁷ KSI Comments at 15-16; KSI (CA) Comments at 5.

¹⁴⁸ KSI (CA) Reply Comments at 4; TX-ACSEC (CA) Reply Comments at 5-6.

cellular users cited safety and security as their main reason for purchasing a mobile phone.¹⁴⁹ Therefore, we affirm our tentative conclusion that such commercial voice telephone services should be subject to the requirements set forth in this Order.

81. In addition, we conclude that certain specialized mobile radio (SMR) providers should be subject to the E911 requirements and schedule imposed on cellular and broadband PCS because these carriers may have significant potential to offer near-term direct competition to cellular and broadband PCS carriers.¹⁵⁰ These SMR providers include two classes of SMR licensees. First, E911 requirements will extend to 800 MHz and 900 MHz SMR licensees that hold geographic area licenses. Second, the rule will cover incumbent wide area SMR licensees defined as licensees who have obtained extended implementation authorizations in the 800 MHz or 900 MHz SMR service, either by waiver or under Section 90.629 of the Commission's Rules.¹⁵¹ Within each of these classes, "covered SMR providers" includes only licensees that offer real-time, two-way switched voice service that is interconnected with the public switched network, either on a stand-alone basis or packaged with other telecommunications services. Because they do not compete substantially with cellular and broadband PCS providers, local SMR licensees, offering mainly dispatch services to specialized customers in a more localized, non-cellular system configuration, as well as licensees offering only data, one-way, or stored voice services on an interconnected basis, would not be governed by these E911 requirements. While some traditional SMRs are treated as CMRS because they are interconnected to the public switched network, we do not intend to require them to implement E911. We find that costs of implementing E911 for local SMRs would outweigh the benefits and, as AMTA argues, imposing this obligation on them may give them the incentive to eliminate their interconnection, which would not be in the public interest.¹⁵² Of course, any SMR provider that is not interconnected to the public switched network or does not offer two way voice service would not be subject to E911 requirements.

82. At this time, we believe that 220 MHz licensees operating on 5 kHz channels are likely to provide more traditional dispatch services, although they may be interconnected to the public switched network. Therefore, we will not require 220 MHz licensees to provide E911. We note, however, that the 220 MHz service is in its infancy and still evolving.¹⁵³ In the future if

¹⁴⁹ Lockheed Comments at 6.

¹⁵⁰ See Applications of Dial Page, Inc., File Nos. 907075-907086 *et al.*, Order, DA 95-2379, paras. 20-29 (released Nov. 22, 1995).

¹⁵¹ 47 C.F.R. § 90.629.

¹⁵² AMTA Comments at 4-7.

¹⁵³ See Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, Amendment of Part 90 of the Commission's Rules To Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, and Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the

this service develops into a mobile telephone service like cellular or broadband PCS, we may revisit this decision. Similarly, it is not certain how multilateration Location and Monitoring Service (LMS)¹⁵⁴ will develop, and therefore it is premature to require such licensees to provide E911 at this time. In addition, we do not believe that it is appropriate to require other two way voice services, such as Air-to-Ground (Part 22, Subpart M) or Public Coast Stations (Part 80, Subpart J). These services are provided for passengers and crews of airplanes and ocean vessels.

We find that passengers and crews do not rely on ground-based rescue operations. Instead, passengers and crews of airplanes rely on other radio communications channels, and passengers and crews of ships rely on internationally approved GMDSS.¹⁵⁵ Further, we do not find that there is a public safety need for E911 on two way, non-voice services. There has been insufficient comment in the record to support a deviation from our original intention to limit the E911 requirements to real time voice services.

83. In general, we believe that the public interest will ordinarily require that all CMRS real time two-way voice communications services provide reasonable and effective access to emergency services. For the present, however, we recognize that adding specific regulatory requirements to MSS may impede the development of the service in ways that might reduce its ability to meet public safety needs. For example, coordination with international standards bodies will be necessary for international calls, and the current state of technology requires more obstacles to be overcome in the case of MSS carriers than for terrestrial carriers. Thus, while we expect that CMRS voice MSS will eventually be required to provide appropriate access to emergency services, we do not adopt schedules or other requirements for them here. The carriers and other interested parties are urged to develop emergency access systems as soon as is feasible to speed eventual implementation of effective emergency access and to minimize the costs of re-engineering facilities.

84. RCA and individual rural cellular providers contend that providing ALI in some rural areas may not be technologically and economically feasible.¹⁵⁶ The Consensus Agreement suggests that some rural or thinly-populated areas may have system configurations which, without augmentation at special expense, would not be able to deliver ALI accuracy comparable to that which we are requiring.¹⁵⁷ The parties to the Agreement state that they agree to work on

896-901 MHz and 935-940 MHz Band Allotted to the Specialized Mobile Radio Pool, GN Docket No. 93-252, PR Docket Nos. 93-144 and 89-553, Third Report and Order, 9 FCC Rcd 7988, 8055 (1995).

¹⁵⁴ See Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, Report and Order, 10 FCC Rcd 4695 (1995). We note that one of the issues on reconsideration of this decision is whether multilateration LMS is CMRS.

¹⁵⁵ See, e.g., COMSAT Comments at 4; COMSAT Reply Comments at 2; IDB Comments at 3.

¹⁵⁶ RCA (CA) Comments at 3-5; US Cellular Comments at 5, 7-9; Springwicks Comments at 9-10.

¹⁵⁷ Consensus Agreement at 3 n. 8.

this in good faith as an implementation issue which need not delay adoption of the general rule.¹⁵⁸ As stated above, we have found E911 service to be in the public interest. We agree that there may be exceptional circumstances where deployment of E911 may not be technically or economically feasible within the five-year general deadline. We believe that these cases can be dealt with through individual waivers. In cases where the cost recovery mechanisms for E911 service uniquely disadvantage a particular carrier, we will also consider waiver requests. We agree with the parties to the Consensus Agreement that this need not delay adoption of the general rule and encourage their efforts to develop recommended approaches to resolving these implementation issues as they are more precisely identified. Moreover, to the extent that, in any rural area, no PSAP Administrator has informed the carrier that the PSAP is capable of receiving and utilizing the data elements associated with the service, the rural carrier will not be obligated to provide E911.

3. Cost Recovery

a. Pleadings and Consensus Agreement

85. Although the issue of cost recovery was not directly addressed in the *Notice*, many commenters in their initial and reply comments urged the Commission to address it in relation to the implementation of E911 compatibility.¹⁵⁹ Several commenters representing the wireless carriers argued that wireless service providers will incur substantial costs in implementing E911 services and expressed concern about their ability to recover their costs.¹⁶⁰ Many commenters emphasized the need to develop a funding mechanism to recover the costs of implementing wireless E911 technology, arguing that such technology should be funded the same way that wireline deployment of 911 service has been funded -- through tax revenues, supplemented with subscriber surcharges.¹⁶¹ Noting that E911 compatibility requirements will be a government mandate, some parties suggested that the Commission should take the lead in addressing cost recovery.¹⁶² RCA, for example, was concerned about imposition of a federal mandate for the provision of E911 services in rural areas, and suggested that the Commission should consider an

¹⁵⁸ *Id.* at 3.

¹⁵⁹ See, e.g., AT&T Comments at 42; PCIA Comments at 28; GTE Comments at 31-32; BellSouth Comments at 20-21; Bell Atlantic Comments at 12; Nextel Comments at 7; Pacific Bell Comments at 3; PCIA Comments at 28; APC Comments at 3-4; Ameritech Comments at 7; Nortel Comments at 62; RCA Comments at 9; US West Comments at 23-25.

¹⁶⁰ AT&T Comments at 42-43; PCIA Comments at 28; BellSouth Comments at 20-21; Nextel Comments at 7.

¹⁶¹ E.g., AT&T Comments at 42; BellSouth Comments at 20-21.

¹⁶² PCIA Comments at 28; RCA Comments at 9.

appropriate cost recovery mechanism for mobile service providers.¹⁶³ Some commenters further requested the deferral of wireless E911 compatibility until an equitable cost recovery mechanism is developed.¹⁶⁴

86. While wireless carriers requested the Commission to provide a means for recovering their costs, public safety groups and other commenters did not address the funding issues in particular in their initial comments. On October 11, 1995, APCO filed *ex parte* comments to address the funding issues specifically. APCO's *ex parte* comments illustrate the variety of existing state funding methods associated with wireline 911 and E911. It noted that although some states took advantage of Federal matching funds to help pay for implementation of the service, there is no national funding of wireline 911. APCO indicated that local and state governments have found ways to finance wireline 911 and argued these governments can be relied upon to do the same for upgrades required to achieve wireless E911 compatibility.¹⁶⁵ Several state and local government commenters noted that they have implemented legislation mandating statewide E911 services and authorizing a telephone tax to fund E911 systems.¹⁶⁶

87. The Consensus Agreement proposes essentially to rely on state and local funding mechanisms, which could be in the form of public appropriations or bond issues, with or without a separate 911 subscriber line fee. The Consensus Agreement parties, however, ask the Commission to declare that state or local 911 fees or taxes reasonably related to recovery of prudently-incurred wireless system or service costs are not barred as a matter of law.¹⁶⁷ They also ask the Commission to state that such fees or taxes should not discriminate between wireline and wireless carriers involved in delivery of 911 services. The parties agree to work in good faith toward the adoption of state and local legislation fairly designed for cost recovery under these principles.¹⁶⁸

88. The comments on the Consensus Agreement take a variety of positions on this issue. The RCC supports the Consensus Agreement.¹⁶⁹ US West contends that the issue of funding is

¹⁶³ RCA Comments at 8-9.

¹⁶⁴ APC Comments at 3-4 (urging the Commission to consider mechanisms that would recover the costs of complying with any compatibility mandate in a competitively neutral manner through a system established at the Federal level); GTE Comments at 31-32 (arguing that the Commission must consider the cost of implementing wireless E911 prior to mandating the provision of these services).

¹⁶⁵ APCO Letter, filed Oct. 11, 1995, at 1.

¹⁶⁶ See, e.g., Oregon Comments at 1-2; New Jersey Comments at 2-5; Lake County, Florida Ordinance 1994-16 (attached to Lake County Comments).

¹⁶⁷ Consensus Agreement at 3-4.

¹⁶⁸ *Id.* at 4.

¹⁶⁹ RCC (CA) Comments at 7.

best left to the local public safety organizations and interested carriers, but that a uniform surcharge should be imposed on subscribers for both wireless and wireline E911.¹⁷⁰ GTE favors letting the states, but not local governments, define the funding requirements.¹⁷¹ Other commenters argue that "no federally mandated funding mechanism should be considered at this time, much less adopted," because they believe that state and local government will address the 911 wireless funding issue appropriately and any federal rules could potentially disrupt current state and local 911 funding systems.¹⁷² Noting that "the major 'road block' to state and local government funding has been *some* cellular carriers," TX-ACSEC contends that "adoption of the Consensus Agreement may provide those cellular carriers the incentive they need to stop undermining attempts to obtain funding for 911 wireless service at the state and local level."¹⁷³ On the other hand, a number of parties contend that the Commission should be more involved in funding, either by mandating the method of cost recovery or by working with the states to develop an equitable funding mechanism.¹⁷⁴ Vanguard urges that existing funding sources should be used, and that implementation should be conditioned on funding by the state or locality.¹⁷⁵ AMSC contends that its subscribers should not be required to contribute to any state or local revenue pool if it is exempted from E911 requirements.¹⁷⁶ AT&T contends that wireless customers should pay only for operating costs of E911, and that the Commission should require state and local governments to pay for equipment upgrades.¹⁷⁷ Ameritech urges that the funding mechanism be carrier and technology neutral.¹⁷⁸ ART argues that the financial burdens of implementing ALI systems should be shared by location services of all kinds.¹⁷⁹ In their reply comments, the signatories to the Consensus Agreement, Comcast, Vanguard, and Nextel argue that a public funding mechanism is required as a prerequisite to imposing obligations on CMRS carriers to provide E911.¹⁸⁰

¹⁷⁰ US West (CA) Comments at 5-6, 10-11.

¹⁷¹ GTE (CA) Comments at 8.

¹⁷² See, e.g. TX-ACSEC (CA) Reply Comments at 3-5; GTE Comments at 8; US West (CA) Comments at 10-11; Vanguard Comments at 4-5.

¹⁷³ TX-ACSEC (CA) Reply Comments at 4.

¹⁷⁴ BellSouth (CA) Comments at 7-8; PCIA (CA) Comments at 8; RCA (CA) Comments at 5-6.

¹⁷⁵ Vanguard (CA) Comments at 4-8.

¹⁷⁶ AMSC (CA) Comments at 9.

¹⁷⁷ AT&T (CA) Reply Comments at 4.

¹⁷⁸ Ameritech (CA) Reply Comments at 3.

¹⁷⁹ ART (CA) Reply Comments at 13-15.

¹⁸⁰ CTIA (CA) Reply Comments at 5; Comcast (CA) Reply Comments at 4-5; Vanguard (CA) Reply

b. Discussion

89. Although we have made implementation of E911 services contingent upon the adoption of a cost recovery mechanism, we will not prescribe a particular E911 cost recovery methodology at this time, for two reasons. First, the record does not demonstrate a need for such action. No party disputes the fundamental notion that carriers must be able to recover their costs of providing E911 services. Nor is there any evidence of state or local officials attempting to prevent a carrier from doing so. To the contrary, carriers and government officials uniformly recognize (1) that resolving cost recovery issues is a prerequisite to E911 deployment,¹⁸¹ and (2) that carriers should not be required to provide E911 capability unless a PSAP is capable of receiving the associated data elements. Moreover, we agree with APCO that local and state governments have pursued innovative and diverse means for the funding of wireline E911 services, and that it is reasonable to anticipate that these governments will follow a similar course with regard to wireless E911.

90. Second, an inflexible Federal prescription would deny carriers and government officials the freedom to develop innovative cost recovery solutions tailored to local conditions and needs. Such a prescription also might unintentionally discourage carriers from developing creative technological approaches to E911 deployment.¹⁸² Thus, Federal action at this time actually might undercut and delay efforts to deploy wireless E911 capabilities. For these reasons, we will not prescribe a cost recovery methodology at this time. Furthermore, nothing in the record persuades us that, as a general matter, all state and local E911 cost recovery mechanisms are barred under the Communications Act. Furthermore, nothing in the record persuades us that, as a general matter, all state and local E911 cost recovery mechanisms are necessarily permissible, or necessarily barred, under the Communications Act. Whether a particular state or local tax or fee would constitute rate regulation under Section 332(c), and therefore be preempted, would depend on the specifics of the tax or fee at issue.

4. Liability and Privacy Issues

a. Background and Pleadings

91. In the *Notice*, we sought comment on the necessity for, and implications of, imposing privacy requirements on information, such as name, address and telephone number, transmitted to LECs and PSAPs in the delivery of 911 emergency services. The *Notice* indicated that the

Comments at 4; Nextel Reply Comments at 3-4.

¹⁸¹ See, e.g., TX-ACSEC (CA) Reply Comments at 3-4; Oregon Comments at 1-2; New Jersey Comments at 2-5; Lake County, Florida Ordinance 1994-16 (attached to Lake County Comments); see also Consensus Agreement at 5.

¹⁸² See, e.g., SAT Comments at 5; ART Comments at 10-11; KSI Comments at 13-14.

Commission, in another proceeding regarding calling number identification services, declined to apply privacy protection requirements in circumstances which did not appear to raise serious privacy implications, including calls to emergency service providers. Recognizing that the states have adopted varying approaches to the privacy interests in information used in the delivery of emergency services, the *Notice* suggested that commenters address the issue of whether there are privacy interests in information transmitted by wireless service providers pursuant to the delivery of emergency services and, if so, what specific measures are appropriate to protect those interests.¹⁸³

92. Most commenters addressing this issue agreed with the Commission's general assessment that privacy protection requirements are not necessary in the delivery of 911 emergency calls.¹⁸⁴ Many commenters argued that a person calling 911 is generally assumed to give up a portion of their privacy rights at the time the call is initiated.¹⁸⁵ APCO, for example, contended that the act of dialing 911 is considered in most state and local jurisdictions to be implied consent to forward ALI information to the PSAP.¹⁸⁶ Other commenters, particularly the search and rescue (SAR) organizations, argued that privacy requirements must be waived for 911 calls in order to facilitate emergency services.¹⁸⁷ ICSAR asserted that to do otherwise would deny emergency services personnel the very information necessary to respond in an efficient manner and would seem contradictory to the concept of 911 service. APCO argued that "the Commission should require that service providers transmit all relevant information to the E911 interface," noting that "the actual display of the information will then be determined by state and local laws."¹⁸⁸

93. While some commenters argued that emergency conditions fall within an exemption to the Privacy Act,¹⁸⁹ other parties expressed their concern over the statutory, privacy-based

¹⁸³ *Notice*, 9 FCC Rcd at 6180 (paras. 56-57).

¹⁸⁴ PCIA Comments at 26; BellSouth Comments at 19-20; Coast Guard Comments at 6-7.

¹⁸⁵ *See, e.g.*, APCO Comments at 52; TX-ACSEC Comments at 12; Pertech Comments at 10.

¹⁸⁶ APCO Comments at 52; *see also* TX-ACSEC Comments at 12; Pertech Comments at 10.

¹⁸⁷ ICSAR Comments at 8; Coast Guard Comments at 6-7.

¹⁸⁸ APCO Comments at 52. *See also* The Maryland Emergency Number Systems Board (ENSB) Comments at 3. Under the State of Maryland Public Information Act (PIA), recordings of calls to 911 emergency telephone system centers are "public records" subject to disclosure requirements. The portion of any recording containing medical or psychological information about an individual may not be disclosed, and disclosure contrary to the public interest may be withheld. All other recordings must be disclosed upon request, except in the extraordinary situation in which a court is asked to withhold otherwise available information. The ENSB contends that this is an issue that should be addressed by each individual state, and that the same policy should be effective for wireless and wireline calls.

¹⁸⁹ Coast Guard Comments at 7 (citing 5 U.S.C. § 552(b)(8)).

limitations on the dissemination of caller location information, which might be viewed as inconsistent with the location identification requirements proposed in the *Notice*.¹⁹⁰ Some commenters suggested that information transmitted to PSAPs by wireless providers should be safeguarded and used only for purposes of providing required emergency services.¹⁹¹ Some commenters contended that the privacy issue should be addressed by each individual state.¹⁹² Other commenters argued that potential liability for transmitting information relating to a caller dialing 911 should be addressed in a separate proceeding.¹⁹³

94. Although the issue of liability was not directly raised in the *Notice*, several commenters asked the Commission to generally insulate wireless service providers from liability for delivering 911 calls to the LEC, including any liability for complying with any priority requirements, violating the calling party's privacy interests, or providing incomplete or inaccurate information.¹⁹⁴ Several parties suggested that wireless service providers should enjoy the same broad immunity from liability that is afforded to landline local exchange carriers.¹⁹⁵ To this end, PCIA suggested that the Commission adopt as part of its rules the liability limitation language discussed at the JEM.¹⁹⁶

¹⁹⁰ AT&T Comments at 40-41 (noting that the Digital Telephone Bill, H.R. 4922, prohibits cellular carriers from disclosing caller name, number, and location information to law enforcement officials without a specific subpoena or court order); SBC Comments at 25-26; PCIA Comments at 26-27 (urging the Commission to immunize wireless service providers from liability for transmitting information that is required to be provided under the Commission's rules or standard industry practices).

¹⁹¹ See, e.g., SBC Comments at 25-26; Coast Guard Comments at 7-8.

¹⁹² Maryland ENSB Comments at 3.

¹⁹³ See, e.g., AT&T Reply Comments at 29-30; Bell Atlantic Comments at 11-12; Bell Atlantic Reply Comments at 4-5.

¹⁹⁴ See, e.g., AT&T Comments at 41; AT&T Reply Comments at 29; Motorola Comments at 17-18 (noting that 60 percent reliability is the maximum that can be expected for future location technology).

¹⁹⁵ See, e.g., AT&T Comments at 40-41; Bell Atlantic Comments at 11 (requesting the Commission to address liability issues in a future proceeding); BellSouth Comments at 20 (arguing that the Commission should hold wireless carriers harmless); CTIA Comments at 20-21; Nextel Comments at 9; PCIA Comments at 27-28; SBC Comments at 24-25 (wireless carriers should be treated the same as landline carriers.); US West Comments at 24-25; APC Comments at 4.

¹⁹⁶ PCIA Comments at 28. PCIA suggested that the Commission should incorporate in its rules the following text, which was discussed at the JEM but not included in the final report, into the Commission's wireless rules:

No provider or subsidiary of a provider or any person that supplies E911 emergency reporting system wireless location information or equipment or employees or agents thereof, or the 911 jurisdiction or the employees or agents thereof, shall be held

95. In the Consensus Agreement, the wireless industry and public safety organizations express their belief that the wireline experience, in which callers generally have been held to consent implicitly to the disclosure of their calling number, location, and associated information, is applicable to wireless 911 communications. Similarly, they note that PSAP and wireline experience with state "Good Samaritan" statutes is applicable to wireless 911 communications.¹⁹⁷ The parties to the Consensus Agreement, however, urge the Commission to address issues relating to the impact of the Communications Assistance for Law Enforcement Act of 1994 (Wiretap Act)¹⁹⁸ on 911 operations and the legal liability of wireless service providers.¹⁹⁹ The parties argue that, despite the express language in the 1994 legislation barring caller location disclosure (except where "determined from the telephone number"), Congress did not intend to preclude location determination and disclosure via other means (such as ALI), in the ordinary course of good faith 911 operations.²⁰⁰

96. In their comments regarding the Consensus Agreement, most commenters agree with the arguments in the Consensus Agreement that Congress did not intend to preclude location determination and disclosure in the ordinary course of 911 operations.²⁰¹ Vanguard also argues that the Wiretap Act is not applicable to the operations of E911 because the language refers to "information acquired solely pursuant to the authority for pen registers and trap and trace devices."²⁰² Alliance contends that it is not appropriate to limit the liability of wireless carriers.²⁰³

civilly liable for the installation, performance, provision or maintenance of an E911 wireless location system if the provider, subsidiary or other supplier, or the employees or agents thereof, or the E911 jurisdiction or the employees or agents thereof act without willful or wanton conduct. Nothing in this section shall affect any liability an E911 jurisdiction may have for operator or operator-supervisor negligence in receiving calls from the public and rendering dispatch services to the public.

"Provider" means a utility, vendor or supplier or licensee of telecommunications services and equipment who provides network system equipment; E911 data base development, installation or maintenance; or wireless location information and equipment; or local exchange access services within an E911 service area.

¹⁹⁷ Consensus Agreement at 4.

¹⁹⁸ Section 1002, 47 U.S.C. § 1002.

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ See, e.g., RCC (CA) Comments at 7-8; AMSC (CA) Comments at 9; BellSouth (CA) Comments at 8-9; Vanguard (CA) Comments at 5.

²⁰² Vanguard (CA) Comments at 5.

In addition, several commenters request specific protection from liability for (1) passing Calling Party Number (CPN) on non-911 calls in violation of per line blocking requirements where the carrier is incapable of passing CPN on 911 calls and blocking it on other calls, (2) providing inaccurate location information, and (3) negligence.²⁰⁴ Ameritech contends that the issue of liability for uncompleted or ineffective E911 connections is unresolved, but is arguably beyond the scope of the proceeding.²⁰⁵

b. Discussion

97. The Consensus Agreement suggests that the Commission resolve whether language in the Wiretap Act affects 911 operations or the legal liability of carriers.²⁰⁶ The relevant language of the statute provides that:²⁰⁷

[W]ith regard to information acquired solely pursuant to the authority for pen registers and trap and trace devices (as defined in section 3127 of title 18, United States Code), such call-identifying information [which the Section requires telecommunications carriers to enable Federal Government officials to access pursuant to a court order or other lawful authorization] shall not include any information that may disclose the physical location of the subscriber (except to the extent that the location may be determined from the telephone number).

98. The Commission has requested that the Department of Justice provide us with a legal opinion regarding the interpretation of this provision as it relates to the requirements contained in the rules we are adopting. We anticipate that we will receive that legal opinion within the 60 day period before those rules are scheduled to become effective. When we receive the Department of Justice's legal opinion, we will address the effect of the Wiretap Act on our rules.

99. We conclude that it is unnecessary to exempt providers of E911 service from liability for certain negligent acts, as PCIA and US West request. If the E911 wireless carriers wish to protect themselves from liability for negligence, they may attempt to bind customers to contractual language, require public safety organizations to hold them harmless for liability, as suggested by US West,²⁰⁸ or, if the liability is caused by the rulings of the Commission, argue

²⁰³ Alliance (CA) Reply Comments at 10.

²⁰⁴ BellSouth (CA) Comments at 8-9; GTE (CA) Comments at 6; US West (CA) Comments at 10.

²⁰⁵ Ameritech (CA) Reply Comments at 3-4.

²⁰⁶ Consensus Agreement at 4.

²⁰⁷ Section 1002(a) of the Wiretap Act, 47 U.S.C. §1002(a).

²⁰⁸ US West (CA) Comments at 10.

that the actions complained of were caused by acts of public authority.²⁰⁹

We are not persuaded by the argument advanced by some parties that the Commission should provide wireless carriers the same broad immunity from liability that is available to landline local exchange carriers. This local exchange carrier immunity generally is a product of provisions contained in local exchange carrier tariffs. We conclude that covered carriers can afford themselves similar protection by including similar provisions in contracts with their customers.

100. While the Interstate Commerce Commission (ICC) has issued rulings affecting the liability of carriers subject to their rules and requirements, those actions were taken pursuant to specific language that gives the ICC authority to modify the imposition of liability.²¹⁰ No such statutory provision is applicable here. In addition, before we would consider taking any action to preempt state tort law, we would need to demonstrate that our rule with respect to limitations on carrier liability is essential to achieving the goals of the Communications Act.²¹¹ We note that the Court of Appeals for the D.C. Circuit has struck down, as infringing upon the jurisdiction of state courts, a Federal Energy Regulatory Commission ruling that conditioned the granting of licenses for dams on a rule of strict liability for property damage caused by seismically induced dam failure.²¹² The court noted that FERC failed to show that the action was essential to achieving the goals of the Federal Power Act. In our view, displacing the jurisdiction of state courts over tort suits for negligence in installation, performance, provision, or maintenance of E911 systems is not necessary to the inauguration of E911 service. We therefore are unable to find that general exemption from liability is essential to achieving the goals of the Communications Act.

101. Aside from the requests for general exemption from liability, several carriers request specific exemptions. BellSouth expresses concern regarding liability for violating per line blocking requirements. GTE contends that it cannot provide 100 percent accurate location information. We find that BellSouth has not provided sufficient evidence to show that it is unable to permit 911 location information to be transmitted without transmitting location information for other calls. Therefore, there is an inadequate record to determine whether exemption from liability for violating per line blocking requirements is essential to the inauguration of E911. Consequently, we shall not grant BellSouth's request for exemption, but shall decide such requests on a case-by-case basis. With respect to GTE's contention that we do not require 100 percent accuracy, a state court finding of liability would not thwart any Commission goal. We do not require 100 percent accuracy, but we expect that as technology

²⁰⁹ See *Shippers National Freight Claim Council v. Interstate Commerce Commission*, 712 F. 2d 740, 745 (2d Cir. 1983).

²¹⁰ *Southern Railway Co. v. United States*, 194 F. Supp. 633 (E.D. Va. 1961).

²¹¹ See *South Carolina Pub. Serv. Authority v. FERC*, 850 F. 2d 788 (D.C. Cir. 1988).

²¹² *Id.* at 792-95.

allows for greater accuracy, wireless providers will upgrade their capabilities accordingly.²¹³

5. Preemption

a. Background and Pleadings

102. In the *Notice*, we stated that we could preempt state regulation that affects interstate service when it is not possible to separate the interstate and intrastate components of the service or when it thwarts or impedes a federal policy. We asked for comment with respect to whether any conflicts exist between our proposed rules and state regulations. Commenters opposing preemption were asked to provide alternatives to ensure that Federal, state, and local requirements do not thwart the nationwide goal of achieving compatibility with enhanced 911 systems.²¹⁴

103. Most commenters supported the need for preemption of state standards to ensure nationwide deployment of consistent technology.²¹⁵ Springwich Cellular, for example, claimed that it can provide the location of the cell site in Connecticut but not in Massachusetts, due to state restrictions in its interconnection arrangements with the LECs.²¹⁶ Two state agencies oppose Federal preemption on the grounds that state and local funds remain the sole support of these systems.²¹⁷

b. Discussion

104. We begin this discussion by emphasizing our understanding of states' interests in telecommunications and public safety matters, including E911 operations. As we stated in the *Notice*, however, it is well established that this Commission may preempt state regulation when (1) the matter to be regulated has inseverable interstate and intrastate aspects; and (2) preemption is necessary to protect a valid Federal regulatory objective.²¹⁸ A primary objective in this

²¹³ We explore this issue in greater detail in the Further Notice we are adopting today. See paras. 135-142, *infra*.

²¹⁴ *Notice*, 9 FCC Rcd at 6181 (para. 59).

²¹⁵ See, e.g., PCIA Reply Comments at 13; Nextel Reply Comments at 7; ICSAR Reply Comments at 3-4.

²¹⁶ Springwich Comments at 7.

²¹⁷ TX-ACSEC Comments at 13; Oregon Comments at 6.

²¹⁸ *Notice*, 9 FCC Rcd at 6181 (para. 59). See *Louisiana Public Service Commission v. FCC*, 476 U.S. 355 (1986); *Illinois Bell Tel. Co. v. FCC*, 833 F. 2d 104 (D.C. Cir. 1989); *California v. FCC*, 905 F. 2d 1217 (9th Cir. 1990); *Texas Public Utility Comm'n v. FCC*, 886 F. 2d 1325 (D.C. Cir. 1989); *North Carolina Utilities Comm'n v. FCC*, 552 F. 2d 1036 (4th Cir.), cert. denied, 434 U.S. 874 (1977); *North Carolina Utilities Comm'n v. FCC*, 537 F. 2d 787 (4th Cir.), cert. denied, 429 U.S. 1027 (1976).

proceeding is to fulfill our statutory mandate of "promoting safety of life and property"²¹⁹ through wireless communications by facilitating the deployment of E911 capabilities to the maximum reasonable extent throughout the Nation. In that regard, we agree with those commenters, including state and local public safety organizations, who argue that Federal preemption of intrastate E911 regulation may be necessary to ensure the achievement of various inseparable, nationwide aspects of E911 operations, including: (1) ubiquitous E911 operational compatibility; (2) the avoidance of state-by-state technical and operational requirements that would burden equipment manufacturers and carriers; and (3) the averting of confusion by end users, especially roamers, who are attempting to contact emergency service providers.²²⁰

105. Moreover, those few state agencies who oppose preemption do not provide any reasonable alternative means to achieve these objectives other than by preemption. Against this background, we conclude that state actions that are incompatible with the policies and rules adopted in this Order are subject to preemption. Since we have not been presented with evidence that specific state regulations are, in fact, incompatible with national E911 goals, we shall not preempt any state regulations at this time. Instead, we shall examine the need for specific preemption in the future on a case-by-case basis, relying on the guidelines expressed in this Order.

6. Equipment Manufacture, Importation, and Labelling

a. Background, Pleadings, and Consensus Agreement

106. In the *Notice*, we sought comment regarding whether it may be necessary to establish specific requirements for base and mobile transmitters to ensure compliance with the objectives of this proceeding, particularly with regard to ANI and ALI. The *Notice* also suggested that if specific requirements for transmitters are necessary, we might require the submission of information demonstrating compliance as part of the equipment authorization process. We further requested comment on the appropriateness of cut-off dates for manufacture, importation, and marketing of equipment that may not meet the standards and how much time should be allowed for transitions to equipment that meets the new requirement. Assuming that such manufacturing standards are necessary, we then asked for comment as to whether to require non-compliant equipment to be labelled with a warning statement on the device and on the outside of the packaging in which it is marketed.²²¹

107. While commenters representing public safety groups supported our proposals in

²¹⁹ 47 U.S.C. § 151.

²²⁰ See, e.g., CTIA Reply Comments at 13; Nextel Reply Comments at 7; ICSAR Reply Comments at 7.

²²¹ *Notice*, 9 FCC at 6180 (para. 55).

their initial comments,²²² commenters representing wireless service providers and wireless equipment manufacturers unanimously opposed the proposals because of the uncertainty of the implementation standards.²²³ Most of the parties opposing the proposals argued that the Commission should not consider altering the equipment requirement until technical solutions are reasonably identified and available. For example, Motorola asserted that overlay systems may be able to provide location information without requiring changes to the subscriber unit or the base station, or to either system element.²²⁴ Thus, these parties strongly urged that any cut-off dates be tied, not to the effective date of rules adopted within this proceeding, but instead to the standards development process which the industry must complete before 911 access can be defined and implemented.²²⁵

108. Although some commenters supported the labelling requirements proposal,²²⁶ most commenters strongly opposed the proposal, arguing that mandatory package and handset labelling is less than helpful in achieving the intended objectives for a number of reasons.²²⁷ Some commenters noted that location technology might not be built into the handset, thereby making warning labels obsolete as soon as network-based location technology becomes operational.²²⁸ Commenters also contended that packaging labels could be misleading and that it is better to accomplish customer education through other means, such as billing manuals and billing information.²²⁹ In reply comments, TX-ACSEC changed its view, concluding that labels on wireless handsets are not the best method of educating end users regarding the limitations of

²²² See APCO Comments at 51; TX-ACSEC Comments at 12; ICSAR Comments at 7; Coast Guard Comments at 16.

²²³ See, e.g., AT&T Comments at 40; CTIA Comments at 22; PCIA Comments at 25-26; Southwestern Bell at 23-26; Nortel Reply Comments at 13; Pertech Comments at 7-8; Motorola Comments at 26; TIA Comments at 15; Nextel Comments at 7-8.

²²⁴ Motorola Comments at 25-26.

²²⁵ *Id.* at 25; see PCIA Comments at 25 (arguing that cut offs are inappropriate because there is currently no basis for determining when compliant technology can be developed).

²²⁶ See, e.g., APCO Comments at 51; TX-ACSEC Comments at 5, 10; New Jersey Comments at 17; ICSAR Comments at 7; Coast Guard Comments at 16.

²²⁷ See, e.g., AT&T Comments at 40; Caddo Comments at 7-8; CTIA Comments at 22; Motorola Comments at 26; Nextel Comments at 8; NATA Comments at 16-17; Nortel Comments at 52; PCIA Comments at 25-26; RCA Comments at 11; and SBC Comments at 23-24.

²²⁸ See, e.g., PCIA Comments at 26; CTIA Comments at 22; AT&T Comments at 40 (noting that labelling will not reflect upgrades to system capabilities); Motorola Comments at 26.

²²⁹ See, e.g., AT&T Comments at 40; CTIA Comments at 22; Motorola Comments at 26; Nextel Comments at 7-8; PCIA Comments at 25-26; SBC Comments at 23-26; CMT Comments at 10.